

60. Apparatus according to claim 59, wherein said transmitter further includes:

at least one coupler for splitting a signal from said modulator into said plural, parallel amplification channels.

61. Apparatus according to claim 59, wherein said transmitter further includes:

at least three couplers for splitting an output from said modulator into four separate amplification channels, said output being amplified to produce at least about a 0.5 W output in each of said channels.

62. Apparatus according to claim 59, wherein said transmitter further includes:

at least one branchline coupler for combining outputs from each of said plural, parallel amplification channels into a single output channel.

63. Apparatus according to claim 60, wherein said at least one coupler is a 90° hybrid.

64. Apparatus according to claim 60, wherein said transmitter further includes:

at least one device for combining outputs from said plural, parallel amplification channels into a single output channel.

65. Apparatus according to claim 56, wherein said antenna includes:
a transmission antenna; and
a reception antenna separated by a distance from said transmission antenna.

66. Apparatus according to claim 56, wherein said antenna is a single antenna having a dual polarization capability for transmitting information with a first polarization, and for receiving information with a second polarization.

5 67. Apparatus according to claim 56, further including:
regulator means having at least one DC voltage regulator for providing a regulated DC output voltage to said at least one of a signal modulator and signal demodulator.

10 68. Apparatus according to claim 58, further including:
regulator means having at least one DC voltage regulator for providing a regulated DC output voltage to said at least one of a signal modulator and signal demodulator.

15 69. Apparatus according to claim 68, wherein said DC voltage means further includes:
at least two DC voltage outputs; and
means for inhibiting a first of said two DC voltage outputs when a second of said two DC voltage outputs is above a predetermined threshold.

20 70. Apparatus according to claim 56, further including:
both a signal modulator and a signal demodulator.

25 71. Apparatus according to claim 70, further including:
a local oscillator for providing a modulating signal to said modulator and for providing a demodulating signal to said demodulator.

72. Apparatus according to claim 71, further including:

hermetically sealed housings for containing components of a transceiver, said modulator and said demodulator being mounted directly to said hermitically sealed housings.

- 5 73. Apparatus according to claim 69, further including:
both a signal modulator and a signal demodulator.

74. Apparatus according to claim 73, in further combination with a modem for providing said data received on an intermediate frequency of 2-3 GHz.

10 75. Apparatus according to claim 74, wherein said modulator, said demodulator, said local oscillator and said modem are configured on a single substrate.

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